Contents

Abe, Shunnosuke, Davies, E., Isolation of F-actin from pea stems. Evidence from fluorescence microscopy Alberti, G., s. Kaiser, T.	51	Lemmon, B. E., s. Brown, R. C. Levy, S., Two separate zones of helicoidally orientated micro- fibrils are present in the walls of <i>Nitella</i> internodes during	
Ashford, A. E., s. Moore, A. E. P.		growth	145
Berry, A. M., s. Liu, Q. Bopp, M., s. Sawidis, T. Brown, R. C., Lemmon, B. E., Pollen development in orchids.		initiation in the Frankia-Ceanothus root nodule symbiosis. A structural and histochemical study	82
Cytoskeleton and the control of division plane in irregular patterns of cytokinesis Brozo, L. A., s. Neville, M. C.	9	ides in roots and root nodules of <i>Ceanothus</i> spp. during intercellular infection by <i>Frankia</i>	93
Cherry, J. H., s. Dylewski, D. P.		Moore, A. E. P., Ashford, A. E., Peterson, R. L., Reserve sub- stances in <i>Paxillus involutus</i> sclerotia. Determination by his-	48
Davies, E., s. Abe, S. Durand, J. M., s. Pesacreta, T. C.		tochemistry and X-ray microanalysis	67
Dylewski, D. P., Singh, N. K., Cherry, J. H., Effects of heat shock and thermoadaptation on the ultrastructure of cowpea (Vigna unguiculata) cells	125	Neville, M. C., Stahl, L., Brozo, L. A., Lowe-Lieber, J., Morphogenesis and secretory activity of mouse mammary cul-	
Evans, M. L., s. Kiss, H. G.		tures on EHS biomatrix . Noguchi, Tetsuko, Morré, D. J., Membrane flow in plants: preparation and kinetics of labelling of plasma membranes from	1
Feldman, J., s. Spiegel, F. W.		growing pollen tubes of tobacco	34
Gibbon, B. C., Kropf, D. L., pH gradients and cell polarity in <i>Pelvetia</i> embryos	43	Ogden, C. G., Ultrastructure of the vegetative organisation and initial stages of silica plate deposition in the soil testate amoeba Corythion dubium	136
Hasenstein, K. H., s. Pesacreta, T. C. Hori, T., s. Kuroiwa, T.		during the amoebo-flagellate transformation of <i>Physarum</i> polycephalum is mediated by an actin-generated force that acts on the centrosome	114
Johnson, J. D., s. Kiss, H. G.			
Kaiser, T., Alberti, G., The fine structure of the lateral eyes of Neocarus texanus Chamberlin and Mulaik, 1942 (Opilioa- carida, Acari, Arachnida, Chelicerata)	19	Pesacreta, T. C., Sullivan, Victoria I., Hasenstein, K. H., Durand, J. M., Thigmonasticity of thistle staminal filaments. I. Involvement of a contractile cuticle	174
Kawano, S., s. Kuroiwa, T. -, s. Ohta, T.		Quader, H., s. Sawidis, T.	
Kiss, H. Guiragossian, Evans, M. L., Johnson, J. D., Cyto- plasmic calcium levels in protoplasts from the cap and elon- gation zone of maize roots	181	Sawidis, T., Quader, H., Bopp, M., Schnepf, E., Presence and absence of the preprophase band of microtubules in moss	
Kreis, M., s. Shen-Miller, J.		protonemata: a clue to understanding its function?	156
Kropf, D. L., s. Gibbon, B. C. Kuroiwa, T., Kawano, S., Watanabe, M., Hori, T., Preferential digestion of chloroplast DNA in male gametangia during the late stage of gametogenesis in the anisogamous alga <i>Bryopsis</i>		Schnepf, E., s. Sawidis, T. Shen-Miller, J., Kreis, M., Shewry, P. R., Springall, D. R., Spatial distribution of β-amylase in germinating barley seeds based on the avidin-biotin-peroxidase complex method	162
maxima	102	Shewry, P. R., s. Shen-Miller, J. Singh, N. K., s. Dylewski, D. P.	

Spiegel, F. W., Feldman, J., Microtubular cytoskeletons of the	de Graaf, B. H. J., s. Kengen, H. M. P.
trophic cells of five eumycetozoans	9
Springall, D. R., s. Shen-Miller, J.	Howard, R. J., s. Bourett, T. M.
Stahl, L., s. Neville, M. C.	
Sullivan, Victoria I., s. Pesacreta, T. C.	Kawano, S., s. Sakai, A.
Watanabe, M., s. Kuroiwa, T.	Kengen, H. M. P., de Graaf, B. H. J., Microtubules and actin
	filaments co-localize extensively in non-fixed cells of tobacco 62
	Kuroiwa, T., s. Sakai, A.
Rapid Communications	
Bourett, T. M., Howard, R. J., Ultrastructural immunolocalization of actin in a fungus	Sakai, A., Kawano, S., Kuroiwa, T., Dispersion of the structural
	organization of proplastid-nuclei in vitro changes the tran- scriptional activity of plastid genes

Index of Keywords

Amoebae 189 β-amylase 162 Anisogamous alga 102 Arhabdomeric cells 19 Asteraceae 174

Bryopsis maxima 102 Ceanothus 82, 93 Cell division 156 Cell-nuclear migration 114 Cell wall formation 156 Cell wall structure 145 Centrosome 114 Centrosome migration 114 Comigration 114 Comparative cytoskeletal structure 189 Corythion dubium 136 Cowpea 125 Crystalline tapetum 19 Cuticle 174 Cytoplasmic calcium 181 Cytoplasmic localization 162

DAPI 114 Differential digestion 102 DNA-protein interaction 203

EHS tumour 1 Elasticity 174 Embryogenesis 43 Endoplasmic reticulum 34 Epithelium 1 Extensibility 174
Extracellular matrix 1, 82, 93

F-actin isolation 51
Fluorescein-S₁-myosin 51
Fluorescence microscopy 51, 114
Frankia 82, 93
Freeze substitution 199
Funaria hygrometrica 156
Fungi 199
Fura 181

Gametogenesis 102 Golgi apparatus 34 Gravitropism 181 Growth 145

Heat shock 125 Helicoids 145 Histochemistry 67 Hordeum vulgare 162 Hyphal tip 199

Immunocytochemistry 93, 199 Indo 181 Infection process 82 Inverse eyes 19

Lumen formation 1

Magnaporthe grisea 199 Mammary gland 1 Maternal inheritance 102
Meiotic cytokinesis 9
Membrane biogenesis 34
Metabolic acid secretion 43
Microsporogenesis 9
Microtubules 9
Methyl esterification 93
Mid-region aleurone 162
Mycetozoans 189

Neocarus texanus 19
Nicotiana tabacum 203
Nicotiana tabacum BY-2 62
Nitella 145
Nitrogen fixation 82

Orchids 9
Organelle nuclei (nucleoids) 102

Paxillus involutus 67
Pectin 93
Pelvetia 43
pH gradient 43
pH sensitive microelectrode 43
Phragmoplast 9
Physarum polycephalum 114
Plasma membrane (tobacco) 34
Polarity 43
Pollen tube 34
Polygalacturonan 93
Polyphosphate 67
Preprophase band of microtubules 156

Proplastid 203
Proplastid-nuclei
(nucleoids) 203
Protein bodies 67
Protist phylogeny 189
Protoplasts 62, 181

Rhodamine-phalloidin 51, 62 Root nodule 82, 93

Sclerotia 67
Silica deposition 136
Spatial distribution 162
Starchy endosperm 162
Symbiosis 82

Testate amoeba 136
Thermoadaptation 125
Thigmonasticity 174
Tip growth 43
Tissue culture 1
Transcription 203
Tubulin 62

Ultrastructure 125, 136

X-ray microanalysis 67

Zea mays 181



